

FEMA Flood Map Modernization

Background Information on Flood Mapping:

The Massachusetts Department of Conservation and Recreation's Flood Hazard Management Program has partnered with Federal Emergency Management Agency (FEMA), through a federal grant, to assist with the management and coordination of Flood Map Modernization in Massachusetts.

The focus of the Map Modernization initiative is to update the effective FEMA Flood Insurance Rate Maps, commonly known as FIRMS. FIRMS are created to support the National Flood Insurance Program, or NFIP. The NFIP is a federal program, administered by FEMA, which makes flood insurance available in communities that agree to adopt corrective and preventative floodplain management regulations that will reduce future flood damages. The NFIP was developed in 1968 in response to the fact that homeowners insurance does not cover flood damage, which left much of the burden of flood recovery to the general taxpayer through federal disaster relief programs. In general, flood insurance from private companies is either not available or extremely expensive.

For information on the NFIP, Please visit:

<http://www.fema.gov/business/nfip/index.shtm>
<http://www.fema.gov/business/nfip/libfacts.shtm>

The FIRMS depict Special Flood Hazard Areas, the areas subject to inundation from the 1% annual chance flood (also known as the Base Flood or the 100-Year Flood). The SFHA determines where flood insurance is required as a condition of a federally insured loan through the NFIP mandatory purchase requirement. This requirement is intended to shift flood damage and recovery costs away from the general taxpayer and on to those who live in floodplains. The risk zones and flood elevations shown on the FIRMS within the SFHA are used to determine flood insurance rates. The SFHA also determines where NFIP floodplain management requirements must be enforced by communities that participate in the program. These include land use and building code standards. In addition to the NFIP, the FIRMS have also taken on additional uses. They are used within FEMA's Individual and Public disaster assistance programs, FEMA's Mitigation Grant Programs, emergency management, and in Massachusetts they identify areas where certain State Building Code and Wetlands Protection Act regulations must be enforced.

Because the FIRMS have so many important uses, and are critical for guiding flood insurance coverage and land use practices in areas subject to flooding, there is a need to keep the maps as accurate and user friendly as possible. To that end, congress has provided FEMA with funding to update and modernize the FIRM inventory. This program is commonly known as Map Modernization.

FIRM maps need to be updated for a number of reasons. The average FIRM in Massachusetts is

more than 20 years old. The Base Maps are out of date and often missing streets or show flooding sources in the wrong location. Flood Hazard data used to identify flood zones may be outdated due to development in watersheds, advances in flood modeling and methodologies, flood control projects constructed, and erosion, among other factors. Another issue is that old FIRM products are all paper based. One of the main goals of this program is to create a digital flood insurance rate map that can be used in a Geographic Information Systems (GIS) environment, as more and more FIRM users gain GIS capabilities. The use of GIS and digital technology to create the digital FIRMs also can potentially be faster and less expensive than the process needed to create a paper product.

DFIRM projects completed and in progress:

Digital FIRMs (DFIRMs) have been completed for 7 individual communities. These projects were done on a community level because they were funded prior to the Map Modernization program, which has been using a countywide model for mapping. The communities are:

- City of Worcester
- City of Revere
- City of Malden
- Town of Northbridge
- Town of Westwood
- City of Quincy
- Town of North Reading

These can be obtained (along with copies of the paper maps) at the FEMA Flood Map Store located at <http://msc.fema.gov/>. Click on the “Product Catalog” link to view available map products. Mapping products are free for community officials, and can be purchased by the general public.

Countywide DFIRM projects are underway for the following counties. These projects should be completed sometime within the next 4 years, depending on the funding available and the complexity of issues/problems encountered during the project. The counties are:

- Middlesex
- Hampden
- Worcester
- Essex
- Norfolk
- Bristol
- Plymouth
- **Barnstable**
- Dukes
- Nantucket

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